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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,312	03/31/2004	Weimin Tchen	491442002000	9110

42178 7590 10/03/2006

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EXAMINER	
WANG, ALBERT C	

ART UNIT	PAPER NUMBER
2115	

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/816,312	TCHEN ET AL.	
	Examiner	Art Unit	
	Albert Wang	2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-38 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-38 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 31 March 2004 is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Original claims 1-38 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the relationship between "a processor programmed" in claim 1 and "a processor further programmed" in claim 2.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 7-10, 15, 21-24, 29 and 35-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Miller, U.S. Patent No. 6,308,265.

As per claim 1, Miller teaches in a processing unit including nonvolatile memory for storing executable code, the nonvolatile memory comprising a vital region for storing

vital code and a region for storing less vital code (fig. 2, flash memory 220 comprising regions 200-1 and region 200-2; col. 5, lines 6-22; col. 6, lines 11-22), an apparatus for executing an update program for managing updates to the vital region of the nonvolatile memory with update code, the apparatus comprising:

a processor (col. 4, lines 45-65, CPU) programmed for

performing a write test by writing test code into the less vital region (fig. 3, step 300; col. 5, lines 45-56) and verifying test status and data (fig. 3, step 310; col. 5, lines 45-56), and

performing an actual write of the update code into the vital region if the write test is successful (fig. 3, step 350; col. 6, lines 27-32).

As per claim 7, Miller teaches the vital region is a boot region and the non-vital region is a test region (col. 5, lines 45-56; col. 8, lines 52-63).

As per claim 8, Miller teaches the vital region is a boot region and the less vital region is an application region (col. 5, lines 6-22).

As per claim 9, Miller teaches the test code is equivalent to application code currently stored in the application region of nonvolatile memory (col. 5, lines 45-56).

As per claim 10, Miller teaches the test code is equivalent to the update code (col. 5, lines 45-56).

As per claims 15 and 21-24, since Miller teaches the apparatus of claims 1 and 7-10, Miller teaches the claimed computer program.

As per claims 29 and 35-38, since Miller teaches the apparatus of claims 1 and 7-10, Miller teaches the claimed computer program.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2-6, 11-14, 16-20, 25-28, and 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller as applied to claims 1, 15, and 29 above, and further in view of Ebsen et al., U.S. Pub. No. 2003/0217257 ("Ebsen").

As per claim 2, Miller does not expressly teach comparing the version number of the update code with the version number for a given region. Ebsen teaches comparing the version number of the update code and the version number of the nonvolatile memory for a given region, and executing the update program only if the version number of the update code is greater than the nonvolatile memory code version number (par. 0044). At the time of invention, it would have been obvious to apply Ebsen's comparing version numbers to Millers apparatus, in order to avoid unnecessary steps.

As per claim 3, Ebsen's vital code inherently stores the version number (pars. 0031, 0033 & 0043, version number is typically stored in header).

As per claim 4, Ebsen teaches writing the version number of the update code into the allocated area in that region of nonvolatile memory if the write test is successful (pars. 0047-0049, version number is typically stored in header).

As per claim 5, Ebsen teaches terminating the update without performing any write operations if the version number of the update code is less than or equal to the nonvolatile memory version number for each vital region (par. 0044).

As per claim 6, Ebsen teaches querying a user whether the update program should proceed (par. 0042).

As per claim 11, Ebsen teaches a host bus adapter (HBA) for implementing upper layer protocols (ULPs) (par. 0030).

As per claim 12, Ebsen teaches an Internet Small Computer System Interface (iSCSI) or a fibre channel controller circuit (par. 0031).

As per claim 13, Ebsen teaches a host computer comprising the HBA (par. 0029).

As per claim 14, Ebsen teaches a storage area network (SAN) comprising the host computer wherein an iSCSI or a fibre channel network is coupled to the iSCSI or fibre channel controller circuit and one or more storage devices are coupled to the iSCSI or fibre channel network (par. 0028).

As per claims 16-20 and 25-28, since Miller/Ebsen teaches the apparatus of claims 2-6 and 11-14, Miller/Ebsen teaches the claimed computer program.

As per claims 30-34, since Miller/Ebsen teaches the apparatus of claims 2-6 and 11-14, Miller/Ebsen teaches the claimed computer program.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert Wang whose telephone number is 571-272-3669. The examiner can normally be reached on M-F (9:30 - 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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